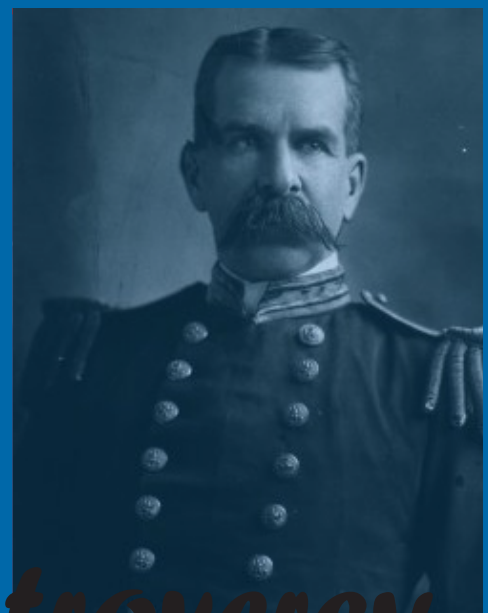


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A Journal of Navy Medical History and Culture

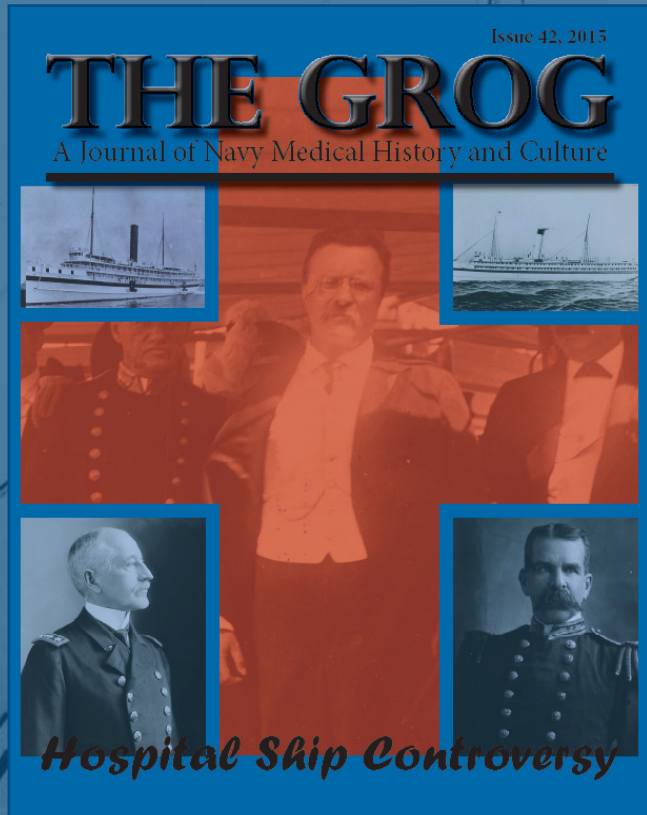


Hospital Ship Controversy

THE GROG

A Journal of Navy Medical History and Culture

Issue 42, 2015



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INTRODUCTION

Over the course of 13 years in the beginning of the twentieth century, four Navy hospital ships would sail under the command of a physician. In total, 18 physicians would command these Navy hospital ships; three commanded multiple ships and only one medical officer—Dr. Arthur Dunbar—has the distinction of commanding three hospital ships. What may seem a curious footnote to us today was an issue that once divided the Navy and even led to the resignation of a well-known flag officer.

In our cover story we look back at the famous "Brownson Affair" and explore the issue and notion of command as it applies to ships and shore stations. We follow this original article with a story brought to us by retired Navy man and active duty Navy medical reenactor, Mr. Charlie Jones. Mr. Jones has been involved in reenacting history for 25 years, and part of this time has served with the "H-Division" aboard the World War II museum ship *USS North Carolina*. In "Restoring History," Jones offers readership a unique tour of this hallowed ship's sick bay.

One hundred years ago, the U.S. Navy suffered one of its first great submarine tragedies when *USS F-4* sank off of Pearl Harbor. Navy Medicine was a vital part of the salvage and recovery effort that followed. We present a fascinating look back at this operation in a "Report of the Recovery of *USS F-4*."

As always we hope you enjoy this tour on the high seas of Navy Medicine's past!

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President Theodore Roosevelt flanked by Rear Adm. Willard
Brownson and Secretary of the Navy Charles Bonaparte

Library of Congress



The Master & Commanding Officer

Roosevelt, Rixey and the Brownson Affair

“During the war with Spain, I was senior operating surgeon on the Ambulance Ship Solace, and organized and drilled her medical department; I have had a large experience in the great civil hospitals of New York City, and in our naval hospitals pretty generally, and have had much to do with handling men. When the men were distinctly and clearly under my command efficiency, discipline and control were complete. Divided authority is the old story of trying to serve two masters.”

~Dr. P.M. Rixey, Chief of BUMED, 1907¹

Maybe it was not exactly the “storybook” way for a flag officer to cap off a 42-year career, but something had to be done to challenge what the admiral saw as an “unnecessary upheaval of naval order.” On Christmas Eve 1907, Rear Adm. Willard Brownson, Chief of the Bureau of Navigation, submitted his resignation to Theodore Roosevelt in protest against the president’s controversial decision to grant medical officers full domain and command over naval hospital ships. Sometimes known as the “Brownson Affair,” the president’s action would slice into heart of the Navy hierarchy and thrust the issue of command authority to the forefront like never before.

The very roots of the Brownson Affair go back long before there was a Willard Brownson or even hospital ships in the Navy. Throughout much of the nineteenth century, medical officers—like their fellow staff corps brethren—were given titles but were not entitled to rank. Only in August 31, 1846, per General Order were staff

corps officers granted what was termed “relative rank,” but this would be a poor substitute at best. Although surgeons with more than 12 years of service were considered equivalent to commanders, they had no authority to actually exercise military command.

Most astonishingly, medical officers heading up activities like hospitals and serving as what would now be considered “Commanding Officer” roles were not COs by Navy law. Per Naval Regulations, “command” and “commanding officers” were restricted to the line community only. Medical officers could be “in charge of” but not “in command of” anything. Clearly, this would serve as a point of contention for medical officers for years, but only finally addressed in 1903 after Surgeon General Presley Rixey took the helm as Chief of BUMED.

During his eight years as Surgeon General Presley Rixey had ushered in a period of excitement and change for the Navy Medical Department. Rixey lead Navy Medicine through a remarkable period of modernization and peace-

time expansion that was unparalleled. Between 1902 to 1910, Rixey help oversee the establishment of: new hospitals in Puget Sound, Wash., Canacao, P.I., Fort Lyon, Colo. (1906) and Guam (1910); the first medical supply depots in Brooklyn, N.Y., Cavite, P.I., and San Francisco, Calif.; and the Navy Nurse Corps (1908). Rixey elevated concepts like medical specialization and graduate medical education through the reestablishment of the Navy Medical School in Washington, D.C. (1902) and sending medical officers abroad to study tropical diseases. He also helped develop (with Roosevelt) what can be considered the first “physical readiness training” in the Navy (1909).² Although, Rixey’s successes as Surgeon General were of his own doing, one cannot underestimate the importance of having the Commander in Chief as confidante and supporter.

In 1903, Rixey complained to Theodore Roosevelt that Navy Regulations forbade the use of “command” when referring to medical officers in charge of hospitals. Roosevelt took up the is-

1. Rixey, Presley. Memorandum Relative to Medical Officers Commanding Hospital Ships. December 1907. BUMED Record Group 52. National Archives (NARA), Washington, DC.

2. Roddis, Louis. Presley Marion Rixey, 1852-1928. Surgeon General reference Files. BUMED Archives.

sue and wrote to Secretary of the Navy William Henry Moody, "It seems to me that Rixey is entitled to use the word 'command' in regard to hospitals under his control. The Line of the Navy must not make themselves ridiculous by being over-zealous in unimportant technical matters."³

The Bureau of Navigation (BUNAV), which was in charge of all personnel matters in the Navy, was reluctant to follow through until Moody ordered that they issue a memorandum giving medical officers the right to use the phrase "In command of." On August 23, 1904, by Special Navy Order 61, medical officers finally had the right to call themselves or be considered "COs" of hospitals and other medical activities.

Since his time as Assistant Secretary of the Navy, Theodore Roosevelt was not only interested in reforming naval affairs, but while president he set out to establish more uniformity between the services. On January 11, 1906, by order of Roosevelt, a joint board of Army and Navy medical officers, designated by the Secretary of the Navy Charles Bonaparte, was appointed to look at "improving the [military] medical departments."⁴ The Joint Board proposed that the Stokes Splint Stretcher be adopted by both services for use on hospital ships, transports and seacoast artillery stations; and Hospital Corpsmen and Medics would now carry a pouch for basic medical wares. The Board set-

tled on a design for new casualty tags, and recommended that hospital ships be in commission in times of peace. But most daringly, the Navy contingent proposed that like the Army, its medical officers should be placed in command of the entire hospital ship since they are in essence merely "floating hospitals."⁵

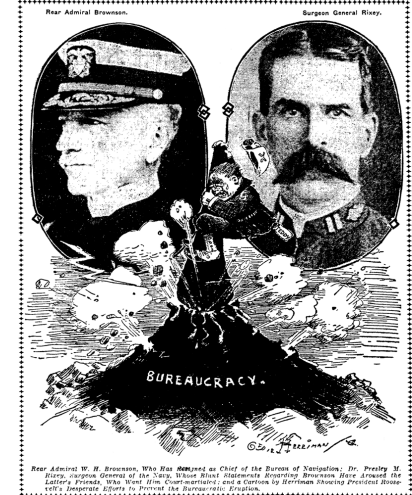
Since 1862, the Army had regularly operated hospital ships for transporting sick and wounded to medical facilities along coastlines and inland waterways. By General Order dated February 6, 1865, these hospital transports and hospital boats were placed exclusively under the command of Army medical officers. In the Spanish-American War, Army physicians commanded the hospital ships *Vigilancia*, *Relief*, *Missouri* and *Olivette*.⁶

The Medical Board's findings were endorsed by the Secretary of War, Bureau of Medicine and Surgery, and submitted to the Bureau Chiefs and the Secretary of the Navy Bonaparte. Chief of BUNAV, Rear Adm. George Converse rejected both the need of hospital ships in peacetime and the bold notion that medical officers serve in command of them. Not only were sick bays aboard regular vessels more than adequate for the care of sick and wounded, but Converse warned that it was not advisable to place a seagoing vessel under the command of a staff officer. In a statement fitting of his name, Converse opined:

"It is necessary in enforcing discipline

ROOSEVELT SITS ON LID OF NAVY DEPARTMENT VOLCANO

Bureaus Are Fighting; General Upheaval Near



and maintaining efficiency that the officers and crews of hospital ships, as well as other vessels belonging to the Navy, should be subject to the laws and regulations governing the Navy, and that the officers intrusted [sic] with the command of these vessels should be those whose experience and training qualifies them for commanding and navigating the vessels under all conditions of weather and unforeseen contingencies...The Bureau, therefore, seriously doubts the advisability or wisdom of placing seagoing vessels under the command of medical officers whose professional training, however, proficient in the practice of medicine and surgery, has not been such as to render them well-fitted for the command of vessels always in close communication with the fleet, and her commanding officer should be one in whom the admiral

3. Roosevelt, Teddy to SECNAV Charles Darling, July 18, 1903, RG 52, 79959. NARA.

4. The Navy was represented by Medical Directors John Wise and James Gatewood as well as Surgeons William Braisted and later Charles Stokes; the Army was represented by Col. Valery Havard, Maj. Charles Lynch and Maj. Carl Darnall.

5. Documents, letters, etc. in connection with appointment of Charles F. Stokes as Commander of U.S.H.S *Relief* and Resignation of Willard Brownson as Chief of Navigation. January 1908. RG 52, 112052. NARA.

6. Roosevelt Letter to SECNAV. January 4, 1908. RG 52, 114342. NARA.

could rely on for the proper handling of the ship as an adjunct of the fleet and whose knowledge of naval matters, signals, and ready and prompt obedience to orders, could at all times be not only relied upon but efficiently performed.”⁷

As a lawyer, Bonaparte was less concerned about who commanded the vessel and focused rather on whether or not the hospital ship’s civilian Sailors would risk the ship’s status as a neutral sailing vessel under the Geneva and Hague accords. Bonaparte went on to pontificate whether or not it would be necessary to “enlist them as members of the Hospital Corps”⁸ while they served aboard the medical ship and asked Rixey for clarification on the issue.

Rixey replied that in order to ensure the ship remained neutral it was important that “war officers” did not serve aboard neutral vessels like hospital ships. “The absence of officers of the line would render a hospital ship more completely neutral” Rixey wrote Bonaparte. “It must be borne in mind that a hospital ship is a floating hospital and that the most finished professional training in navigation, ordnance, and seamanship does not render line officers well fitted to command hospitals.”⁹

What did command look like for Rixey? In his letter to Bonaparte, Rixey outlined a scenario of total self-sufficiency and without line officers:

“The Medical officer in command is to receive all orders from the commander

in chief or from the Department and to transmit them to the captain of the ship. His command should be absolute, the captain of the ship taking his directions from the senior medical officer. The captain should be a naval officer, but belong to the merchant marine, and should have entire control of the navigation of the ship and of the civilian crew and regulate discipline and matters pertaining to them. The discipline of the medical branch should be in the hands of the medical officers in command. Only the universal code would be used in signaling and line officers would not be necessary for the purpose.”¹⁰

Rixey would go on to state that the

“The command of a hospital ship should unquestionably be vested in a medical officer, and no line officer should be aboard it.”

~Teddy Roosevelt

“universal” signal code is well understood by graduates of the naval medical school and one of the physicians aboard the ship would be responsible for signaling in addition to other duties.¹¹

In a personal letter to friend Dr. Hugh Young, Rixey wrote “...the Bureau of Navigation would be held responsible to the Department for the proper navigation of the ship just as the medical officers in battleships are held responsible by the Department for the proper

care of the sick and injured on battleships. The same conditions appertain. The medical officers do not claim that they can navigate a ship. The line officers on battleships and cruisers do not claim that they can take care of the sick and injured.”¹²

Bonaparte agreed with Rixey and on December 12, 1906 fully endorsed the Medical Board’s report. Although in theory Navy surgeons now had the right to command at sea, Rixey still had hurdles to overcome. Rear Adm. Converse would retire in 1906 and was replaced with a new Bureau Chief, Willard Brownson. And days after his endorsement, Bonaparte left office to become the new Attorney General. Most importantly, the Navy did not have a hospital ship in commission in December 1906.

After seven years of service, the Navy’s hospital ship USS *Solace* was placed out of commission in 1905. In 1902, the Navy had acquired the former Army hospital ship *Relief*, which based in Mare Island, Calif., but this vessel was not in commission nor ready for active service. Brownson, now responsible for all naval personnel matters and ship preparation, was determined to have Bonaparte’s decision overturned. In November 1907, Brownson sent Rixey an eight-page letter presenting reasons against fitting out the hospital ship or even assigning a physician to command one. He argued that cable operators and

7. Converse letter to SECNAV, June 4, 1906. House of Representatives, Document 552. RG 52, 114052. NARA.

8. Documents, letters, etc.

9.. Rixey Letter to Bonaparte, September 24, 1906. House of Representatives, Document 552. RG 52, 114052, NARA.

10. Ibid.

11. Ibid.

12. Rixey to Dr. Hugh Young. January 24, 1908 Personal Letter—asking him to lobby Senator Hale on his behalf. RG52, NARA.

telegraph engineers were not expected to command of cable ships and postmasters would never be asked to command mail steamers. Even artillery officers were not to fit to command battle ships, which could be called “floating forts.”¹³ Brownson’s implication in his final statement would undoubtedly have irked Rixey. “It must not be forgotten that a ship is an inanimate object and requires at all times a competent officer in command to insure the safety vessel at sea.”¹⁴

With the Bureau Chiefs at a standstill on the issue, Roosevelt asked Secretary of the Navy Victor Metcalf to have Rixey and Brownson come to the White House to present their cases. On December 21, 1907, Roosevelt met with Brownson and Rixey in the oval office to “hash it out.” Rixey related the issue of neutrality under international law. He asserted that back in the Spanish-American War the hospital ship *Solace* “destroyed her claim to neutrality on several occasions” and even took part in offensive operations. “When commanded by a line officer, [she] attempted to claim the prize money in the capture of the *Adula* (while professing neutrality) and *Solace* interfered with the progress of a schooner in the Old Bahama Channel so that the U.S. torpedo boats could board and investigate her.”¹⁵

Rixey’s “Exhibit B” was the *Army Man-*

ual of the Medical Department (1906) which provided that all “hospital boats” be exclusively under control of medical departments. Rixey pleaded a need for uniformity between the services, to which Roosevelt stated to the Secretary of the Navy Victor Metcalf, “give them what they have in the army.”¹⁶

In a desperate move, Brownson sent a duplicate copy of his Rixey letter directly to Roosevelt hoping it would inspire some reconsideration. The president had made up his mind. Not only would a medical officer be placed in command of hospital ship, but the *Relief* would be placed in commission and join the Great White Fleet journey around the globe.¹⁷

In protest, Brownson resigned. His resignation incurred Roosevelt to angrily remark, “The officers of the navy must remember that it is not merely childish, but in the highest degree reprehensible to permit either personal pique, wounded vanity or factional feeling on behalf of some particular bureau or organization to render them disloyal to the interests of the navy, and therefore of the country as a whole.”

On December 23, 1907, Rixey ordered Surgeon Charles Francis Stokes to Mare Island as the commanding officer of USS *Relief* and prepare her for commission. He then wrote to the Bureau of Navigation requesting that the

Relief be placed in commission by February 1, 1908.¹⁸

After the ship was placed in commission, Dr. Stokes sailed her across the Pacific to join the “Great White Fleet,” for which Brownson had helped lay the foundation.

Over the course of the next 13 years the Navy hospital ships *Relief*, *Solace* (AH-2), *Comfort* (AH-3) and *Mercy* (AH-4) would sail under the helm of a physician. In total 18 physicians would command hospital ship; three commanded multiple ships and only one medical officer—Dr. Arthur Dunbar—has the distinction of having commanded three hospitals ships.



"When the Navy Department puts doctors in command of the hospital ships," ca. 1908

by John D. McCutcheon

Library of Congress

13. Documents, letters, etc.

14. Brownson to Rixey, November 18, 1907. House of Representatives, Document 552. RG 52, 114052. NARA.

15. Crowley, Martha. *The Navy Medical Department, 1890-1916* (Dissertation). The George Washington University, 1989.

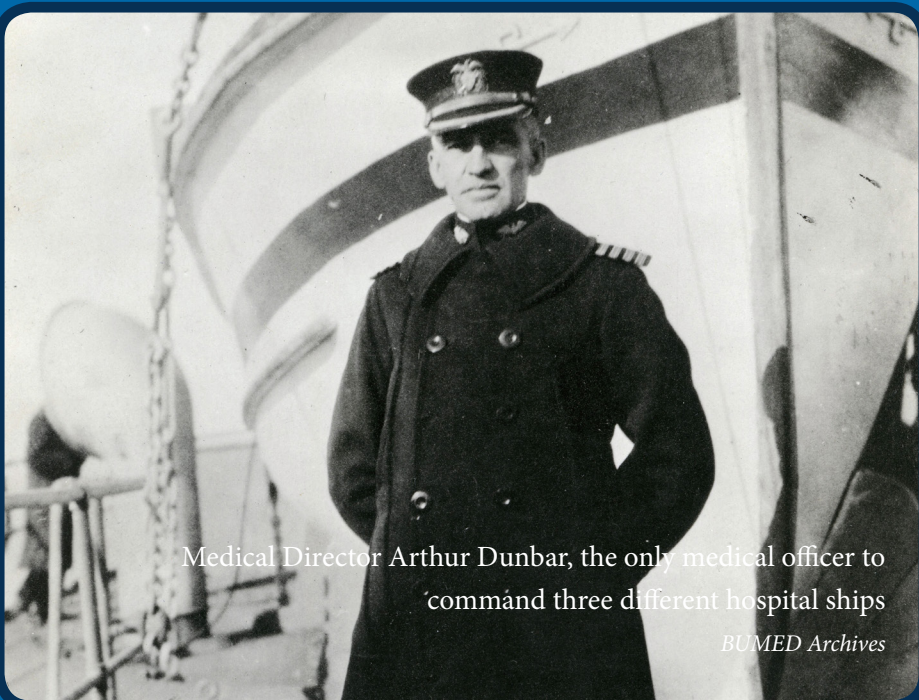
16. Roosevelt letter to SECNAV Victor Metcalf, January 4, 1908. RG 52, 127622. NARA.

17. Crowley

18. In January 1908, Rixey proposed to SECNAV Metcalf that a medical officer be placed in command “for a provisional period of 6 months before the adoption of the permanent policy.” In case of absence or disability of commanding medical officer, the command would fall to the next medical officer on duty. (Rixey Memo for SECNAV, January 30, 1908. RG 52, 114399. NARA.

In 1921, the new hospital ship *Relief* (AH-1)—ironically the only ship to be built as a floating hospital—was the scene of discord between the medical officer and sailing master during a voyage along the foggy coastline of California. The incident offered naval authorities a reason to revisit the issue of command at sea and ultimately overturn the decision. It was determined that a medical officer did not have the time to administer to both run a hospital aboard a ship and command it.

Today, civil service mariners not line officers operate as captains of Navy hospital ships; Navy medical personnel serve as commanders of the ship's Medical/Military Treatment Facility. Although the medical command of what Rixey once called “floating hospitals” may have been short-lived, it could be argued that the very spirit and questions of sea lanes of naval leadership and who deserves the right to serve as commanding officers remains with us today. 🌀



Medical Director Arthur Dunbar, the only medical officer to command three different hospital ships

BUMED Archives

Medical Commanders of Hospital Ships, 1908-1921

USS *Relief*

1908-1910

Charles Stokes, 1908

Arthur Dunbar, 1908-1909

George Barker, 1910

USS *Solace* (AH-2)

1909-1921

George Pickrell, 1909-1910

Manley Gates, 1910-1912

L. von Wedekind, 1912-1915

Robert Kennedy, 1915-1917

Norman Blackwood, 1917

E.E. Olds, 1918-1919

Ralph Plummer, 1919-1921

USS *Comfort* (AH-3)

1918-1921

Charles Oman, 1918

Arthur Dunbar, 1918-1919

Ulysses Webb, 1919

H.R. Hermes, 1919-1920

USS *Mercy* (AH-4)

1918-1921

Norman Blackwood, 1918

Ulysses Webb, 1918-1919

Arthur Dunbar, 1919

Will M. Garton, 1919-1921

USS *Relief* (AH-1)

1920-1921

Richmond Holcomb, 1920-1921



RESTORING HISTORY: *The Sickbay of USS North Carolina*

By Charlie Jones

The 1MC clicks to life. The sound of the Boatswain's pipe calls "All Hands." The bugle plays. The Boatswain's mate of the watch announces, "Now hear this: sick call." Ah, sick call, that magical time when medical professionals try to weed out the goldbricks from those in real need. It happens every day on board ship. However, there is a ship that sick call only happens 3-4 times a year.

No, it is not that there's a miracle cure or super healthy sailors. It all part of the "Battleship Alive" program conducted four times a year by the USS *North Carolina* Living History Crew on board the Battleship North Carolina Memorial in Wilmington, N.C.

The USS *North Carolina* (BB-55) was

commissioned on April 9, 1941. It was the first new battleship the U.S. Navy commissioned since 1922. This was a time when the might of a nation's naval power was reflected in its battleships. For its time, this ship was state of the art. She was one of the most decorated ships of World War II, participating in every major naval offensive in the South Pacific, earning 15 battle stars. She was decommissioned in 1947.

In the late 1950's, the Navy began scrapping all of the decommissioned ships from WWII as they were never going to be used again because of obsolescence and the need to reduce excess assets and pier space. The citizens of North Carolina decided to save their namesake battleship as a memorial honoring the 10,000 North Carolinians of

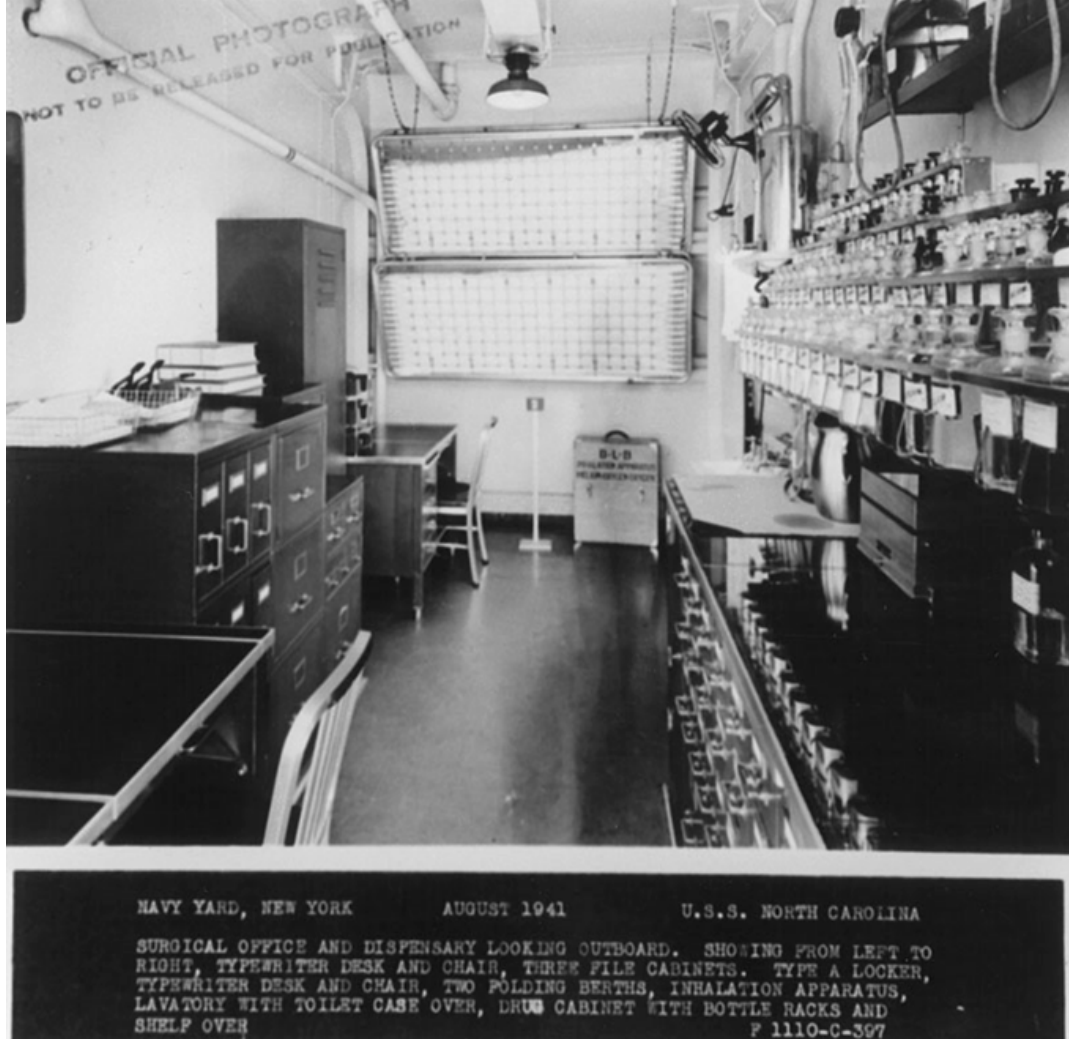
all branches of service who gave their lives in World War II. A statewide fundraising effort was successfully undertaken that brought the ship to Wilmington in 1961. It was the first ship acquired as a memorial after the USS *Texas* was donated in 1948.

The Living History Crew (LHC) began in 1997 when then battleship curator, Jeff Bockert, started a living history program aboard the ship. The members of the LHC are all volunteers and most have experience as reenactors and in living history programs. Some have previous military experience, but not necessarily in the Navy. The purpose of the LHC is to present to the public a small slice of life of the Sailors who manned the battleship during WWII. It is one thing to see a restored space on the ship

but the addition of people actually working in the space gives it an added dimension. While dressed in original or reproduction WWII uniforms, we present interpretive programs in several areas throughout the ship that include: Combat Information Center (CIC), engine room, post office, ships store, tailor shop, ships office, signal bridge, sickbay and navigation. In addition to interpreting the spaces, we present scenarios throughout the day to show a bit of the Sailors' life. These scenarios include Captain's Mast, pay call, mail call, CIC and engineering drills, General Quarters, and sick call.

I became involved with the LHC shortly after their first event. At the same time the LHC began, I and several other fellow reenactors in Maryland started the American Military Medical Impression, Inc. (AMMI). AMMI is a 501c3 non-profit educational corporation that presents living history programs that focuses on the military medical profession of the 20th Century. While our main focus has been U.S. Army field hospitals of WWII, we cover other conflicts such as the Korean War, and Vietnam War. When we heard about the living history program on the battleship, several of us who had interest in naval history signed up to cover the Medical Department, or H Division, and present our medical program on the ship.

As with all of our medical impressions, our first step was research. We got our hands on all books, histories and documentation of the Navy's and the ships medical department and built our program around what we could present to the public on the ship. We also used interviews with crew



One of the 1941 “as-built” photos of the pharmacy that shows the bottle racks and pharmaceutical bottles that have been missing from the display.

All images courtesy of author

members who were on the ship during WWII. Our sick call scenarios include dental problems, appendectomies, burns, and of course, the goldbricks.

During WWII, the battleship's complement was over 2,300 men. To see to the health and welfare of the crew, the battleship's medical department complement was 39 which consisted of four doctors, three dentists, one warrant officer, one Chief Petty Officer, 22 petty officers and eight hospital apprentices. The sickbay was as well-equipped as a land-based hospital with all the major modern equipment and supplies of the time. Like the ship, the sickbay was state of the art for 1941. In addition to providing medical care to its crew, they

also supplied medical care to the smaller ships that were a part of the fleet, such as destroyers, that did not have a hospital on board.

As part of our tasks of putting on the living history program, the LHC also has undertaken many restoration projects in the spaces we man during our weekends. Our goal is to restore the areas to their war-time configuration. One of the good things about the *North Carolina* is that when she was saved as a memorial, a lot of the documents such as original blueprints and correspondence, was still on board. Over the years, her former crewmembers have donated many artifacts and photographs of their time on board.

Since this was a brand new ship and the first of its class, the Navy took a series of as-built photographs of many of the compartments throughout the ship. These pictures are available at the National Archives in College Park, Maryland and copies are maintained at the *North Carolina* Memorial archives. Although there were many changes to the ship both during and after the war, the photographs and blueprints are invaluable in helping us research how the spaces are supposed to look and what we seek to replicate and restore.

The sickbay area consisted of the main battle dressing station, dental office, dark room, laboratory, pharmacy, doctor's office, isolation ward, operating room, scrub room, sterilizer room, sickbay, sickbay head, medical stores and VD treatment room. Our goal is not only the restoration of the space, but to stock the spaces with wartime artifacts to make the spaces looked "lived in and in use. All of the spaces except for the main battle dressing station and the sickbay are behind doors with clear windows so the public can see the spaces. When the LHC is there, we open the doors and allow the public supervised access.

The first step in restoring the medical area was to inventory what was in place, what was missing, and what we could find in various storage areas on the ship. Then we had to determine which configuration we would restore the spaces to. There were several major and minor changes in sickbay throughout the ship's life. We weren't going to move major items that were welded into place so we concentrated on the parts that were missing. An overall cleaning and painting was our first step.



A 2014 photo after the newly manufactured pharmacy bottle racks were installed. The racks were made and donated by the Wilmington Grill Company. In accordance with the Navy supply catalog, the set would have had 105 bottles.

The first area we concentrated on was the Operating Room. This was pretty much intact so there were not a lot of changes necessary. We got the lights working and filled up the cabinets with period type supplies and laid out the space to look like it is ready for the first surgical case to come in. The one major item we are missing in this space is the portable X-ray machine.

The next area was the doctor's office. The desks and cabinets were in place but we needed it to look occupied. We scoured used book stores for period medical books, *The Manual of the Medical Department*, *Manual for Naval Hygiene*, *The Hospital Corps Handbook*, and Pharmacist's Mate rate training

manuals. We lucked into copies of most the wartime issues of the United States *Naval Medical Bulletins* and issues of the *Hospital Corps Quarterly*. For paperwork, we obtained copies of many of the medical forms including the health record and made reproduction copies so that we can use them without destroying originals.

One of our H(ospital) division members, Brian Barfield, took on the restoration of the sickbay head as his personal task. It was previously used as a storage and work area so it was a real mess. In addition to the LHC living history weekends, he made many trips down from Richmond, Va., over several years to scrape, paint and clean the sick-

bay head from the overhead to the deck. We are still missing a couple of sinks, but we are constantly on the lookout for the proper ones. We can't let all of Brian's work go to waste so the plans are to either put a window in the door or a Plexiglas wall panel just inside the door so the public can see the entire space.

We also emptied the dark room (for processing X-ray films) of all the spare parts that were being stored there and cleaned and reassembled all of the equipment to make it look usable. We put a window in the door in order for it to be seen.

With only two known pictures of the laboratory, which is not much bigger than a closet, we added all of the equipment to make it a functioning lab. We are still missing the sink and the wall-mounted lab equipment cabinet but it is 95% done.

The dental office was a little bit more of challenge. As built, the dental office consisted of three bays; the one forward and the one aft contained dental stations and the middle one was an administrative desk. Sometime after 1944, the administration desk was moved and replaced by a third dental station. When we got there, only the first two bays had dental stations and the third one was missing the chair and the workstation but the X-ray machine was there. There were many other items missing, the major item being the dental cabinets.

After searching the ship, we found no chair or cabinets but found parts of several dental workstations, but we were not sure if we could build a complete workstation out of them. Eventually, through eBay and Craigslist, we found a dental chair in Alabama, the correct dental lights in New Jersey and Georgia,

a dental air compressor in Kentucky, and dental cabinets in Florida and Pennsylvania. Plus, with the help of Dr. Michael Zalob, a retired and former Navy dentist from New York who recently moved to Wilmington, we got a complete dental station from the Battleship Memorial USS *Massachusetts* in Fall River, Mass. These items are pretty large and heavy and difficult to ship, so our we took a

road trip with rental trucks and trailers to pick these items up, sometimes covering over 1,000 miles in a weekend. Dr. Zalob joined H Division and completed a lot of the recent work including painting of the dental office equipment to help complete this space.

The latest major task was just completed last year. In the pharmacy area, we were missing several major items to



The USS *North Carolina* LHC H Division's simulated appendectomy for the Battleship Alive program. As you can see, the public comes in for a close-up view of our surgery. We have to make our surgical simulators as realistic as possible to stand up to the close scrutiny.

complete this space. The biggest items we were missing were the pharmacy bottle racks. The pharmacist's mate that had pharmacy training had to mix or compound many of the medicines that were needed. While some pre-mixed/pre-packaged medicines were available, if they ran out while at sea, they still had to have the means to make what was needed.

We searched the ship from bow to stern but the racks were not to be found. It became our holy grail since it is the most prominent item in the space.¹ Because of their status, the museum ships around the country have the opportunity to visit the Navy's inactive ships to scrounge for parts before they get sent to the scrapyards. Since modern ships don't use these kinds of pharmacy racks, we could not find any in the inactive ships visits. However, a couple of years ago, we were able to secure one rack from the old cruiser USS *Des Moines* before she went to the scrap yard. But we had to wrestle with the scrounging team from the *Massachusetts* for it. With one in hand, we searched for someone to make four more for us to give us a complete set. We were not having much luck.

In the summer of 2014, Mr. Rob Stidd came aboard looking to volunteer his time at the memorial. Rob was a machinist and draftsman and he said his

For more information on the Battleship North Carolina Memorial, visit their website at <http://www.battleshipnc.com>. For more info on the Living History Crew, visit our website at <http://ussncliving-history.com>. The Battleship Alive program runs in the spring (varying dates as it coincides with the North Carolina's Crew reunion), the last weekend in September, Fourth of July, and the first weekend in December.

father worked at the Brooklyn Navy Yard when the *North Carolina* was being built. We immediately showed him the one bottle rack we had and asked if he could help us get some made. He promptly drew up the plans for the other four racks. Two of the racks had four shelves and three of them had three shelves. Once the plans were complete, Robb contacted the Wilmington Grill Company and they volunteered to make the racks and donate them to the ship. The racks were installed in September 2014.

Most of the items we have found and installed in sickbay have been paid for out of H Division personnel's pockets. This is a labor of love. Most of the H Division personnel live in Maryland or Virginia and make the up to seven

hour one-way trip, four or more times a year to present the program or to work on the spaces. While AMMI does not have any official role with the LHC, I and a couple of other members belong to both groups. I personally do not have a medical background, but I was a U.S. Naval officer from 1979-85. I got promoted from H Division to department head, then to commanding officer, but recently stepped down from that role back to H Division. But we do have medical experience in H Division. Over the years, we have had a doctor, a dentist (former Navy), EMTs, paramedics and first responders as part of our personnel. And we have some, like me, who do not have medical backgrounds. We provide the training necessary to play the roles of hospital apprentices and pharmacist's mates to put on a good show for the public.✿

ABOUT THE AUTHOR

Charles B. Jones retired from the Federal Aviation Administration after 24 years of service and six years as a U.S. Naval officer. He has been a WWII reenactor since 1989 and has been a medical Living Historian since 1997. He is the author of *MTBSTC - The Motor Torpedo Boat Squadron Training Center*.

1. An interesting adventure on the bottle racks. Every time we sent out a search party around the ship to try and find the pharmacy bottle racks, they would bring us two small bottle racks that we didn't know where they went. This seemed to go on for years and we kept moving them from one storage area to another to get them out of the way. It wasn't until we really got into working on the spaces that we determined that one of those racks went into the lab and the other went into the pharmacy and was mounted above the (missing) pharmacy bottle racks. Our difficulty in identifying this rack was that it didn't show up prominently in the photos that we have and the detail drawings for this space is not included in the ship's drawings. And we continue to find items that we need to obtain after analyzing additional photos or plans. It shows what a long process the restoration really is.

Medical Highlights of Activities of USS *North Carolina* (BB-55)

Excerpted from The United States Navy Medical Department Historical Data Series, World War II: Volume I: Battleships prepared by the Administrative History Section, Bureau of Medicine and Surgery, 1946 (Unpublished).

It is difficult to give a true picture of just how well the medical department functioned unless a careful report was written at the time the battle actually occurred. However, from the meager reports available I would say that during the fifteen major engagements this vessel participated in, the medical department was able to render adequate aid to all casualties. The ship was fortunate in that at no time did it ever have such a high percentage of casualties as to make it a physical impossibility for medical personnel to render adequate aid unassisted. This possibility was always kept in mind however, so all hands were instructed in first aid and supplies and personnel were dispersed around the ship.

On August 24, 1942, the *North Carolina* suffered her first casualty. The Japanese made a sustained air attack on the USS *Enterprise* and the *North Carolina* while they were making an air strike off the Solomon Islands. An aviation machinist mate received a penetrating wound of the abdomen while manning his anti-aircraft gun. He died that same afternoon and was buried at sea. The medical department functioned efficiently during this battle.

On September 15, 1942, the *North Carolina* was struck by a torpedo on her port bow causing serious damage in frames 37 to 55 on the third deck. One deck hand was missing, apparently blown

overboard by the explosion. Three men were conducting an air test in a wing compartment near where the torpedo struck. These men were found dead from extreme multiple injuries.

One man was shaving in his division washroom near where the torpedo struck and was also found dead from multiple extreme injuries. The bodies were transferred to Tongatabu Island. The medical department functioned efficiently in this battle.

On June 15, 1944, while supporting amphibious force landings on Saipan and Tinian, the *North Carolina* was under heavy air attack. One man received a laceration wound on his left thigh while manning a 20mm machine gun. He was returned to duty immediately after treatment. One man suffered a laceration wound on his left hand while manning a 20mm machine gun. He returned to duty immediately after treatment, a third man received a laceration on his right heel while manning a 20mm machine gun. He was returned to duty after five days in treatment.

On January 21, 1945, an enemy suicide plane crashed into USS *Ticonderoga*. A destroyer brought the following cases to the *North Carolina* for treatment: 1.) wound, fragment, bomb 2.) hematoma, traumatic, left pleural cavity 3.) hematoma, right pleural cavity. These patients were treated in the sick bay and recovered. One case of wound, perforated of abdomen, with prolapse of small and large intestines, died following intestinal resection and closure. The medical department worked efficiently in this battle. On April 6, 1945, the *North Carolina* was engaged in bombardment of enemy shore

installations and supporting fleet carrier units during the Okinawa Shima Occupation. Enemy planes attacked the task force and while the entire formation was engaged in anti-aircraft firing this ship sustained a 5-inch shell hit from another ship in the formation. The projectile exploded ... and fragmented over the adjacent area. Forty-seven casualties, three of which were immediately fatal were incurred. The material condition which existed at that time was condition one, in the AA batteries, which allowed immediate access to the sick bay area. Following emergency first aid "on the spot" all casualties were evacuated within a period of 30 minutes to the sick bay and they were quickly classified as to necessity for early treatment.

The three fatalities were removed to the Warrant Officers Mess where identification and fingerprinting procedures ... were carried out. Final preparation and encasement was completed by evening and burial at sea was accomplished within the next 24 hours.

It was noted that there was an acute shortage of stretcher bearers topside. The theory of utilization of bystanders for this duty does not work out in practice. In the first place all non-medical personnel seemingly had another job to do. Secondly, the gun crew seemed untrained in the technic of lowering stretchers through narrow hatches without discomfort to the wounded. In this connection stretcher slings for all upper level stations had been ordered, but had not been completed. In subsequent drills these slings have greatly facilitated handling of patients where inner access is blocked. ☸



Navy Medicine's War on King Tobacco

From smoke-lamps to chewing boards to cigarette rations there is no denying that tobacco has been a part of Navy history from the very beginning. Through the ebbs and flows of wars and peace, aboard ship and ashore, cigarettes have been everything from that “quick fix” stress relief to a reason to take a break. In the “Age of Sail,” tobacco was a means of acceptance into the naval fraternity. An editorial in *The Analectic Magazine* pub-

lished in 1816, advised that all young officers needed to learn to chew tobacco and to show others that they were “master of this indispensable accomplishment.” The author writing under the nom-de-plume “Old Lieutenant” would go on to advise that they needed to “take special care to spit in the most conspicuous manner.”¹ There’s little doubt the resulting shipboard puddles of tobacco would have predated smoking and tobacco chewing as recognized

health hazards in the Navy.

As the concept of public health and disease prevention was taking form across the globe in the 1870s, we begin to see Navy physicians looking at tobacco use as a viable threat to one’s health. In an 1873 report, Navy Surgeon A.A. Hoehling remarked that tobacco usage aboard USS *Monongahela* was excessive and attributed it to cases of gastric disturbances (i.e., “eructations and emesis.”) Hoehling noted that crewmem-

1. Old Lieutenant. “To the Young Officers of the American Navy.” *The Analectic Magazine*; Oct 1816, 8, pp341-342.

bers averaged three pounds of tobacco monthly.²

In 1870s and 1880s, Medical Director Albert Gihon, USN, a noted sanitary reformer of the day, became a vocal opponent of tobacco use. While serving as medical officer at the Naval Academy, Gihon called tobacco the most “important matter in the health history” of the midshipmen and urged its strict enforcement.³ Gihon could be considered something of a “tobacco moralist” who connected its use with self-destructive behaviors like alcohol abuse, and “uncontrolled” sexual proclivities.⁴

By the early twentieth century, tobacco was on the rise in Navy and the statistics were staggering. In 1907, Navy Surgeon O.H. Norton reported that a three-month supply of tobacco aboard USS *Missouri* consisted of 1,500 books of cigarette papers, 1,200 pounds of smoking tobacco, as well as 37,000 Navy-issued cigarettes—and this was for a complement of just 700 Sailors and Marines!⁵ In the very same year, Navy Surgeon General Presley Rixey called for a ban on smoking for all Sailors under the age of 21. Presaging the health risks of tobacco, Rixey said the prohibition of smoking would minimize daily visits to the sick bay and “enhance the gen-

eral efficiency of service.”⁶ Rixey would place tobacco use in the same category as “alcohol indulgence” and the ever-pernicious “cocaine habit.”⁷

TOBACCO IN THE NAVY

It is ironic that in an era where chewing gum was barred aboard Navy ships, chewing tobacco was flourishing. In 1911, the Navy Paymaster-General established a special “Chewing Board” comprised of enlisted Sailors who would personally test the sample plugs of tobacco submitted by the fifty prospective vendors.

Any doubts that King Tobacco was a patriot would be silenced in the world wars. During the “Great War,” tobacco was called “indispensable” to service personnel by General John Pershing and tobacco rations were issued to every Sailor, Soldier and Marine.⁸ In World War II, packets of cigarettes were sold at military stores tax-free for just a nickel and distributed free to troops overseas.⁹ At the end of the Second World War, when the Armed Forces began rationing tobacco at military establishments, a ration card could earn you six packs of cigarettes, 24 cigars or four ounces of tobacco weekly. Even German and Japanese war prisoners

King Tobacco Chronicles

1875—The Board of Medical Officers at the Naval Academy releases report on the use of tobacco pointing to its deleterious effects on midshipmen.

1877—Dr. Albert Gihon submits study on tobacco to the Surgeon General of the Navy.

1881—Albert Gihon writes that tobacco is an “agent that has been mischievously represented to be innocuous only because of the remarkable tolerance exhibited by a few individuals, and is actually capable of such potent evil, which, through its sedative effect upon circulation, creates a thirsts for alcoholic stimulation.”

1892—Naval prisoners are allocated a pound of chewing tobacco a month, but not allowed to smoke.

April 1905—Nine tobacco firms submit bids to supply the Navy with its annual supply of tobacco (150, 000 pounds).

1907—Surgeon General Presley Rixey proposes that all Sailors under the age of 21 be prohibited from smoking aboard ships.

1911—Chewing gum is barred by the Navy, but chewing tobacco is not.

May 1918—Tobacco rations are issued “to every soldier, sailor and marine.” Gen. John J. Pershing called tobacco rations to U.S. troops “indispensable.”

1925—Chewing Tobacco is for the Birds. Arctic explorer Lt. Robert E.

2. Hoehling, A.A. *Hygienic and Medical Reports by Medical Officers of the U.S. Navy*. Washington, DC: GPO, 1874. p315.

3. Gihon, Albert L. Medical report of the Naval Academy, Annapolis, MD. *Annual Report of the Surgeon General of the U.S. Navy*. Washington, DC: GPO 1879. pp 134-138.

4. Gihon, Albert. “A Naval Surgeon on Tobacco and Boys.” *Christian Advocate*; June 9, 1881; 56. p14.

5. Norton, O.D. “Notes on Navy Rations.” *Annual Report of the Surgeon General of the U.S. Navy*, 1907. p102.

6. Kress, D.H. “A Puff of Smoke: Is the cigarette in opium’s class.” *Herald of Gospel Liberty*; Aug 12, 1915; 107, 32. p1008.

7. Rixey, Presley. “Cigarette Habits aboard Men-of-War.” *Annual Report of the Surgeon General of the U.S. Navy*. Washington, DC: GPO, 1908. p141.

8. Moyer, David. The Tobacco Reference Guide. (www.tobaccoprogram.org)

9. Ibid.

were allocated smokeless tobacco.^{10, 11}

Military publications from the 1940s and 1950s (e.g., *Our Navy*) are chock full of cigarette ads championing Camels, Chesterfields, and Lucky Strike cigarettes and glorifying their “mildness” and “flavor.” Wartime films of the era go far to put a heroic face behind every cigarette.

The concept of tobacco cessation in the military came into its own in the 1960s. Only days after U.S. Surgeon General Luther Terry’s groundbreaking report condemning smoking (January 11, 1964), the Navy initiated its first anti-tobacco policy. On January 14, 1964, Navy Surgeon General Rear Adm. Edward Kenney stated that the Navy would no longer be involved promoting “smoking or imply an official endorsement of the alleged psychological or social merits of cigarette smoking.”¹² Kenney would also call for the cessation of cigarettes in Navy and Marine Corps rations.¹³ By the end of January 1964, the Department of Defense prohibited the distribution of cigarettes as gifts at all military hospitals.¹⁴

During 1964, we see an early anti-smoking cessation study aboard submarines. As part of “Operation No Smoke,” 125 Navy officers and enlisted

personnel aboard the Polaris submarine USS *Nathan Hale* go three-months without cigarettes. This voluntary (and “unofficial”) effort led by Cmdr. Robert Thompson, Medical Corps, USN and Chief Hospital Corpsman Gene Jarvala was considered a means of reducing the operating costs of submarines. Thompson believed that smokeless environment would “reduce” the need of “aerosols” and thus require “less use of electrostatic precipitators” for purification. Some 46 years later, smoking would officially be banned aboard Navy submarines.¹⁵

THE MODERN ERA

At the end of the 1970s, Secretary of Health Education, and Welfare Joseph Califano, Jr. famously called tobacco “Public Enemy No. 1.”¹⁶ Following Califano’s lead, the Navy Medical Department took the fight against King Tobacco to its hospitals at decade’s end. Surgeon General Vice Adm. Willard Arentzen, called all healthcare professionals who smoked “derelict” from their duties and they needed to lead the fight against tobacco by example.¹⁷ In a “Dear Doctor” letter to all naval hospital commanding officers dated September 1977, Arentzen wrote, “As

Byrd takes 24 pigeons with him on his journey to the North Pole as a means of “emergency communication” to supplement his radio sets. Byrd also takes 25 pounds of tobacco to serve as the birds “chewing ration” and be used as a disinfectant for their nests.

1941-1945—Cigarettes are sold at military stores tax-free for about a nickel a pack and distributed free to personnel serving overseas.

1943—Manual of Naval Hygiene is published. Manual report issues of tobacco smoke aboard submarines and refers to it as a “real hazard.”

1945—Where has all the tobacco juice gone? The U.S. District Court in Washington authorizes a ban on the cuspidors and spittoons at all federal buildings.

3 June 1945—U.S. Armed services begins rationing tobacco at military establishments.

13 August 1948—Per BUMED Circular Letter 48-88, cigarettes donated and shipped to naval hospitals by a “tobacco or other company for use by patients” is approved. Twenty-six years later the Navy would ban these gifts at hospitals.

1957—The U.S. Surgeon General Leroy Burney states that the “weight of medical evidence incriminates excessive cigarette smoking as one of the causative factors of lung cancer.”

July 1959—Using statistics on causes of death from the Veterans Admin-

10. “Outlook Better but Services to Ration Fags.” *The Washington Post*; May 17, 1945; p5.

11. “Navy Ends Tobacco Rationing.” *The New York Times*; August 22, 1945; p14.

12. RADM Edward Kenney Memorandum for Secretary of the Navy, dated January 14, 1964. BUMED Correspondence Files, Record Group 52, National Archives II, College Park, Md.

13. Ibid.

14. “Pentagon to Ban Cigaret [sic] Gifts.” *The Chicago Tribune*, Jan 31, 1964. p5.

15. Landry, John. “‘Operation No Smoke.’ Polaris Sub crew aims to kick the tobacco habit with three-month test of lobeline sulphate and will power.” *The Hartford Courant*; March 29, 1964.

16. Moyer, David. *The Tobacco Reference Guide*. (www.tobaccoprogram.org).

health care professionals we must encourage programs to decrease morbidity and premature mortality, including decreasing tobacco smoking.”¹⁸

The very same year was marked by DoD’s first policy on reducing smoking in the workplace and, also, the development of an anti-smoking program targeting high-risk groups (i.e., chronic bronchitis, asthmatics, and asbestos workers).¹⁹ Nationally, the American Cancer Association inaugurated its first “Great American Smokeout” campaign, an event the Navy and Marine Corps has been part of ever since.²⁰

By the 1980s, it was clear that tobacco use was a bigger problem for the Armed Services than the greater civilian population. A 1983 Department of Defense survey found that 56 percent of males and 48 percent of women in the military smoked; this compared with 36 percent of males and 29 percent of females in the greater civilian population.²¹ Four years later, a DoD survey found that 44 percent of all Navy personnel smoked compared to 29 percent of all civilian adults.²²

Despite these statistics, progress

was being made against King Tobacco. In January 1987, Naval Hospital Camp Pendleton, Calif. became the first “smoke-free” military hospital in the United States.²³ Two years later tobacco was banned in all Navy and Marine healthcare facilities; and seven years later the Department of Defense Instruction 1010.15 prohibited smoking in all DoD workplaces. In 1994, the Pentagon would make history as the largest smoke-free office building in the world.²⁴

Even though King Tobacco’s dominion continues to be chipped away through increasingly restrictive tobacco control policies and healthcare promotions, his presence remains. Today it is estimated that 20 percent of military personnel smoke and 13 percent use smokeless tobacco. Tobacco-related illnesses in the military are estimated to cost \$1.6 million annually.²⁵ ❁

istration, Dr. H.F. Dorn publishes report “Tobacco Consumption from Cancer and Other Diseases.” Dorn identifies relationship between a history of smoking tobacco and various diseases. He reports that the death rate of smokers exceeds that of nonsmokers by 30 percent. Those who smoked two packs or more of cigarettes had the highest death rate (twice that of non-smokers).

1962—President John F. Kennedy proposes to the Secretary of the Department of Health, Education and Welfare that an advisory committee review published data and available knowledge regarding the harmful effects of tobacco. The findings (published 11 January 1964 as the Surgeon General’s Report) shows that cigarette smoking is harmful and associated with several diseases.

1963—Lt. John Lane, MC, USN publishes study on “Effects of Maternal Cigarette Smoking on the Fetus.” In study, Lane found that babies who are born to smoking mothers are significantly lighter and shorter than mothers who did not smoke and that the premature rate was twice as great in the smoking group.

1963—American annual cigarette consumption increases from 350 billion in 1947 to 523 billion in 1963.

4 January 1964—Anticipating the U.S. Surgeon General’s report on tobacco, the American Tobacco Company announces that it will begin listing the tar and nicotine content on packages of filtered cigarettes.

17. “Navy MDs Who Smoke Shouldn’t.” *U.S. Medicine*, October 15, 1977.

18. Arentzen, Willard. “Dear Doctor,” September 21, 1977. BUMED Archives.

19. DoD Instruction 6015.18. “Smoking in DoD Occupied Buildings and Facilities,” dated August 18, 1977.

20. “History of the Great American Smokeout.” (www.cancer.org)

21. Conway, Terry and T.A. Cronan. “Smoking and Physical Fitness Among Navy Shipboard Personnel.” *NHRC Report No. 86-33*. 1986.

22. Conway, Terry, Suzanne Hurtado, and Susan Woodruff. “Tobacco Use Prevention and Cessation Programs in the U.S. Navy.” *Public Health Reports*. January-February 1993, Vol. 108, No. 1.

23. Moyer.

24. DoD Instruction 1010.15 “Smoke-Free DoD Workplace.” Dated March 7, 1994.

25. Shane, Leo. Senate panel proposes ending tobacco discounts on bases. *Air Force Times*. August 4, 2014. p6.

11 January 1964—Surgeon General of the United States Luther Terry releases groundbreaking report *Smoking and Health: Report of the Advisory Committee to the Surgeon General of the Public Health Service*.

14 January 1964—Navy Surgeon General Rear Adm. Edward Kenney initiates new policy on smoking and advises greater health education on smoking hazards. As part of the policy, the Navy would no longer participate in any program intended to “promote cigarette smoking or imply an official endorsement of the alleged psychological and social merits of cigarette smoking.” This was to include a discontinuance of free cigarettes to members of the Navy and Marine Corps, and that cigarettes no longer be included in military rations.

April-June 1964—As part of “Operation No Smoke,” 125 Navy officers and enlisted men aboard the Polaris submarine USS *Nathan Hale* go three-months without cigarettes. This voluntary (and “unofficial”) operation was lead by Cmdr. Robert Thompson and Chief Hospital Corpsman Gene Jarvala. Some 46 years later, smoking was officially banned aboard Navy submarines.

30 January 1964—As a result of the U.S. Surgeon’s General’s Report, the Department of Defense prohibits the distribution of cigarettes as gifts at military hospitals.

1977—Tobacco accounts for 40 percent of all farm income in the United States (\$866 million).

18 August 1977—Department of Defense Instruction 6015.18 establishes procedures for controlling smoking in military occupied buildings and facilities. Smoking would now be restricted to staff lounges, private offices and specially designated areas (e.g., visitor waiting rooms, etc). Employers are recommended to separate smokers and non-smokers in the work spaces.

21 September 1977—Navy Surgeon General Vice Adm. Willard Arentzen issues “Dear Doctor” letter throughout the Navy Medical Department to encourage the development of anti-smoking measures in Navy Medicine. Admiral Arentzen would write, “As health care professionals we must encourage programs which will decrease morbidity and premature mortality, including those programs decreasing tobacco smoking. This is not a program to discourage cigarette smokers, but to encourage them not to adversely affect their own well-being and that of their families and shipmates.”

October 1977—Navy Surgeon General Vice Adm. Arentzen calls healthcare workers who smoke in front of their patients “derelict” from their duties. Arentzen asserts that, “It is ironic that cigarette smoking has traditionally been banned around oxygen equipment. Since tobacco itself is hazardous, it should not be tolerated where patients are assembled, particularly those with pulmonary disease.”

November 1977—Vice. Adm. Arentzen initiates anti-smoking campaign in Navy Medical Department. He authorizes Lt. Cmdr. Charles Juels, MC, USN, NEPMU No. 2 to “design an ac-

tive smoking cessation program” and initiate a pilot study in the Tidewater area to “establish and evaluate the most effective anti-smoking campaign compatible with the Navy environment and supported within the limitations of Navy funding.”

16 November 1977—The American Cancer Association inaugurates the nationwide Great American Smoke Out event to encourage Americans to quit smoking, even for a day. This event continues to be held on the third Thursday of November every year with Navy participation.

18 November 1977—Vice Adm. Arentzen issues note to all commanding officers of all naval medical activities alerting personnel on problems of obesity and self-destructive behaviors like smoking and alcohol cause. He recommends that they each insist “on no smoking in their patient care areas” and that their staff “maintain reasonable weight standards.”

11 January 1978—Secretary of Health Education, and Welfare Joseph Califano, Jr. calls tobacco “Public Enemy No. 1.”

1983—According to a Department of Defense survey, 56 percent of males and 48 percent of women in the military smoke. This compares with 36 percent of males and 29 percent of females in the general civilian population.

1986—Department of Defense directs all branches of service to establish smoking cessation and prevention programs.

17 July 1986—The Navy prohibits smoking in closed-areas ashore, but leaves ships and aircraft to designate no-smoking areas. Policy is seen as less restrictive than the other services.

1986—The U.S. Marine Corps becomes the first military service to prohibit smoking during recruit training.

1987—Department of Defense reports that 44 percent of the Navy's force (555,000 personnel) smoke versus 29 percent of all civilian adults.

January 1987—Naval Hospital Camp Pendleton becomes first smoke-free military hospital.

1988—Philip Morris publishes a monthly newsletter called *The Military Smoker* featuring articles opposing restrictions on tobacco products at military facilities.

1989—Tobacco use is banned in all Navy and Marine Corps healthcare facilities.

1990—About 86 percent of Navy commands offer some type of tobacco cessation educational material or programs. Almost one-half of all Navy commands offer psychological or behavioral cessation programs. In 1990, only 61 percent of commands had a written policy or instruction regarding tobacco use.

1990—Philip Morris donates two million free cigarettes to military personnel serving in Desert Storm.

1992—According to the *Navy Times*, Tobacco sales in military commissaries in 1992 totaled \$529 million.

1992—According to a Worldwide Survey, 17.4 percent of military personnel used smokeless tobacco, including 36 percent of Marines.

1992—A survey aboard aircraft carrier USS *Abraham Lincoln* revealed that 45 percent of the crew used tobacco.

1993—Publication of *Tobacco Use Prevention and Cessation Programs in the U.S. Navy*.

July 1993—USS *Theodore Roosevelt* becomes the first smoke-free aircraft carrier. Due to Congressional opposition, the ban on cigarettes aboard the ship was reversed in late 1993.

7 March 1994—Department of Defense releases DoD Instruction 1010.15 "Smoke-Free DoD Workplace." Instruction prescribes procedures for a smoke-free workplace, reducing workplace health hazards and furthering occupational health goals. As part of this instruction, indoor smoking is prohibited at all DoD workplaces and designated outdoor smoking areas are established. The Pentagon becomes the largest smoke-free office building in the world.

1995—Tobacco accounts for 11 percent of all sales at military commissaries. In comparison, at civilian stores tobacco accounted for only 3 percent of total sales.

1996—The Department of Defense estimates that its 448,000 smokers (or 32 percent of military force) incur about \$530 million a year in health expenses and \$345 million in expenses related to loss of productivity.

8 August 1997—President Clinton issues an Order 13058 that bans smoking in the interior of all government owned, rented or leased spaces.

January 1998—The Navy Environmental Health Center (NEHC) Health Promotion Department develops the first BUMED Tobacco website designed to help the medical team and tobacco users address tobacco cessation and prevention in the Department of the Navy.

March 1998—The policy Put Prevention into Practice (PPIP) is issued by the Assistant Secretary of Defense, Health Affairs. The Navy Environmental Health Center has the lead for BUMED, and provides annual conferences for implementation of PPIP and addressing tobacco cessation is a key element of the prevention plan for dental and medical facilities.

1998—Capt. David Moyer, MC, USN publishes *The Tobacco Almanac*, a reference guide designed for the "tobacco control community." From 1991 to 1998, Dr. Moyer served as the Navy Surgeon General's expert on tobacco.

1999—The Department of Defense Prevention, Safety, and Health Promotion Council (PSHPC) establishes the "Alcohol Abuse and Tobacco Use Reduction Committee" to provide advice on policies related to the supply, responsible use of, and the demand for alcohol and tobacco products. The Committee would later be renamed the "Alcohol and Tobacco Advisory Council (ATAC)."

1999—The VHA/DoD Clinical Prac-

tice Guideline for the Management of Tobacco Use Cessation in the Primary Care is released for use in the military and the Veterans Administration.

2 January 2001—Department of Defense updates DoD Instruction 1010.15 “Smoke-Free DoD Workplace.” Updated instruction helps protect civilian and military personnel from hazards caused by exposure to tobacco smoke. Instruction also called for establishment of “outdoor smoking areas” that are accessible to employees and provides necessary “protection from the elements” and expansion of smoking cessation programs.

March 2001—The REACH (Recruit Education to Achieve Health) program was initiated at Naval Training Center Great Lakes by the Dental Command. The prevention program targeted the 50,000 new recruits attending basic recruit training with a Dental Officer speaking to each group on dental health, nutrition information, tobacco awareness, intervention and remaining tobacco free.

2001—The Task Force on Community Preventive Services found evidence of increasing the unit price for tobacco products by 20% would reduce overall consumption of tobacco products by 10.4%, Navy Medicine (NMCPHC) has been a federal liaison to this group since 1997 and has suggested that the discount on tobacco sales on military facilities as contributing to higher military tobacco use compared to civilian counterparts.

January 2002— *No Dips and or Butts*,

a self-help manual to help tobacco users quit tobacco, is released by the Navy Environmental Health Center.

August 2002—Navy Environmental Health Center requests that all MTF Health Promotion programs begin collecting data on the numbers of patients seen for tobacco cessation counseling and reporting their outcome data and other primary and secondary interventions twice a year.

January 2003—The Navy Environmental Health Center develops and releases the Fleet Health Risk Assessment (HRA) at the request of the Pacific Fleet. The short 22 question tool was designed to assess lifestyle risk factors, provide feedback to the individual and also report command level data on the health of the specific population. The first two questions on the HRA address smoking and smokeless tobacco use. Annual reports of the HRA results are produced.

2003—The updated VA/DoD Clinical Practice Guideline for the Management of Tobacco use was released for use by medical department staff, and Navy Medicine SME’s were active participants in the development process.

January 2004—Navy Medicine presented at the TRICARE Conference on military efforts to address tobacco along with the Army, Air Force and DoD.

2004—A Health Promotion Toolbox was launched by the Navy Environmental Health Center, with November as tobacco free living month. The Toolbox was created to provide ready

to use and uniform resources for commands to use as part of their wellness programming efforts.

February 2004—A National Action Plan for Tobacco Cessation was released, and Navy Medicine had a representative on the interagency subcommittee which developed the plans as requested by the Secretary of Health and Human Services Tommy Thompson.

2004—The Navy Alcohol and Drug Abuse Prevention at Navy Personal Command develops tobacco resources on their website.

2005—To address the high rates of tobacco use among the military in California, Project Uniform was established. Navy Medicine and USMC Semper Fit have worked closely with Project Uniform staff to reduce tobacco use on their installations and communities.

2006—BUMED approves formation of a disease management team- the Tobacco Cessation Action Team, to address tobacco cessation with evidence based tools and support structure within the medical and dental arenas of Navy Medicine. A call for members to form the multidisciplinary team was issued in April and selections for the team were made by BUMED and the Navy Environmental Health Center.

20-23 June 2006—The first meeting of the Navy Medicine Tobacco Cessation Action Team (TCAT) is held at NAB Little Creek, Virginia. Membership included representatives from BUMED,

Dental, Family Practice, Internal Medicine/Cardiology, Pharmacy, Nursing, Substance Abuse, Mental Health, Health Promotion and Reserves, and a charter was developed to address tobacco use.

2006—The Quit Tobacco – Make Everyone Proud, the DoD's tobacco cessation counter-marketing campaign was initiated through TRICARE. The campaign was created based on significant formative research and focus group studies that gained a better understanding of tobacco use in the military.

2006—The Health Promotion Department at the Navy Environmental Health Center releases a new resource - Navy Tobacco Cessation Facilitator Basis CD to provide additional materials for Providers and Facilitators with tobacco cessation.

2007—TRICARE estimates that health-care and related losses due to tobacco use costs the Department of Defense \$1.6 billion annually.

2007—Smoking rates among service personnel returning from Iraq and Afghanistan is fifty percent higher than rates of non-deployed personnel.

2007—Quit Tobacco – Make Everyone Proud launched the website, UCanQuit2.org to provide resources to service members who use tobacco. This site serves as a primary platform to drive behavior change, facilitate learning, and encourage information sharing and peer-to-peer networking among service members and health providers.
23 May 2007—Institute of Medicine re-

leases Ending the Tobacco Problem: A Blueprint for the Nation.

2007—The DoD Quit Tobacco Make Everyone Proud campaign initiated the Live Chat service on the campaign website, UCanQuit2.org. It features a one-on-one real-time chat option that gave visitors the chance to ask trained tobacco cessation coaches questions about quitting tobacco and staying quit.

2007—The Blue H Navy Surgeon General's Health Promotion and Wellness Award, established in 2007 and used by about 300 Navy and Marine Corps organizations, includes criteria for tobacco cessation and prevention at the clinical, community and workplace level for medical, fleet and semper fit commands. Participating organizations use these criteria to measure their delivery and achievement of specific tobacco policies and activities.

December 2007—An article is published in the American Journal of Health Promotion "Cost Associated With Being Overweight and With Obesity, High Alcohol Consumption, and Tobacco Use Within the Military Health System's TRICARE Prime-Enrolled Population" that finds DoD spends an estimated \$2.1 billion per year for medical care associated with tobacco use (\$564 million), and non-medical costs related to tobacco use, excess weight and obesity, and high alcohol consumption in excess of \$965 million per year.

2008—The Navy and Marine Corps Public Health Center and Naval Medical Center San Diego Health promo-

tion programs began providing Tobacco Cessation Facilitator Training for the Independent Duty Corpsmen before they graduate from their yearlong training at the Surface Warfare Medical Institute in San Diego. Every subsequent class continues to be trained as Tobacco Cessation facilitators so as Primary Care Providers the IDC can provide counseling and medications to address tobacco cessation in the fleet and with operational commands.

31 July 2008—The Secretary of the Navy issues a wide-reaching SECNAVINST 5100.13E to provide policy and program guidance for the control and reduction of tobacco use in the Department of the Navy. The vision of the DoN is to be tobacco free. Navy medical personnel are not to use tobacco products while in the presence of patients or in uniform while representing Navy Medicine.

20 November 2008—Two Medical Treatment Facilities (Naval Medical Center Portsmouth and Naval Hospital Yokosuka) become the first Navy Medicine tobacco free medical campuses on the 2008 Great American Smoke Out Day.

2008—The Navy Medicine Tobacco Cessation Action Team launches their website located on the Navy Environmental Health center website. The website was designed to assist the medical and dental team, Marine Corps Semper Fit, fleet and others with tobacco information, best practices, resources, clinical practice guidelines, special topics, policy and literature review.

31 July 2008—The Secretary of the

Navy issues a wide-reaching SECNAVINST 5100.13E to provide policy and program guidance for the control and reduction of tobacco use in the Department of the Navy. The vision of the DoN is to be tobacco free. Navy medical personnel are not to use tobacco products while in the presence of patients or in uniform while representing Navy Medicine.

2008—The Veterans Health Administration and the Department of Defense adopted the 2008 Treating Tobacco Use and Dependence Clinical Practice Guideline developed by the U.S. Public Health Service (PHS).

2008—The DoD Quit Tobacco Make Everyone Proud campaign releases new public service announcements and dvd's that feature military leaders, including Navy Surgeon General Vice Adm. Adam Robinson, encouraging quitting tobacco and not starting tobacco use.

2009—Publication of *The Institute of Medicine Combating Tobacco Use in Military and Veteran Populations* is released, with contributions by BUMED.

December 2009—The Navy Surgeon General issues the Memo- Recognition of Outstanding Performance in Adoption of Tobacco-Free Medical Treatment Facilities.

March 2010—The DoD "Quit Tobacco Make Everyone Proud" campaign launched Train2Quit, an interactive, online tobacco cessation training. This program provides customizable, self-paced tools to guide service members

through the process of quitting.

March 2010—BUMED instituted new clinical outcome measures and performance based Tobacco Metrics for Navy MTFs. The three tobacco metrics established were - Metric 1 Screening for tobacco use; Metric 2 Diagnosing tobacco use; and Metric 3 Treating tobacco use. The three tobacco metrics were updated monthly by the Navy Marine Corps Public Health Center Health Analysis Department and placed on the NMCPHC Population Health Navigator.

1 October 2010—Navy Surgeon General Vice Adm. Adam Robinson releases a Memo on Electronic Cigarettes. He states that Navy Medicine does not support or condone their use.

2010—New tobacco cessation facilitators are trained for each submarine at their bases by Commander Submarine Force Medical Deputy Force Surgeon, regional MTF Health Promotion Tobacco Cessation Facilitator Trainers and the NMCPHC Tobacco Program Manager. Special resources and materials were created to assist with smoking and smokeless tobacco cessation for the submariners and their families.

2010—The Navy Medicine Tobacco Cessation Action Team (TCAT) was "sunsetting" as a success and "an official" Navy Medicine work group. During its tenure, the TCAT successfully improved access to care and removed barriers to tobacco treatment at MTFs and within fleet and operational commands, developed numerous position statements and assisted with policy, ini-

tiated efforts for tobacco free campuses, provided consultation to operational, medical and DoD groups, helped develop system wide metrics, wrote numerous articles, provided numerous presentations to various Navy, Marine Corps, DoD and national groups, and enhanced efforts for tobacco cessation among the fleet and operational commands.

31 December 2010—Detailed research conducted by the Naval Submarine Medical Research Lab demonstrated that non-smoking submariners were indeed being exposed to second hand smoke, providing the definitive science to support a smoking ban. Each submarine had several crew members that were trained as tobacco cessation facilitators by Navy Medical Tobacco specialists and Nicotine Replacement Therapy was readily available on board each boat. Tobacco cessation counseling and FDA-approved medications were also accessible at local Medical Treatment Facilities for crew members and their families.

January 2011—All federal health plans provide tobacco cessation benefits for beneficiaries. The new benefit covers Department of Navy civilians and their families for smoking and smokeless tobacco cessation counseling and medications.

2011—Report reveals thirty-one percent of Marines smoke and 32 percent use smokeless tobacco.

July 2011—The Navy and Marine Corps Public Health Center sponsored a new evidence based Veteran Admin-

istration Tobacco workshop - Integrating Smoking Cessation into PTSD and Mental Health Treatment for the Navy and the region in Portsmouth, Virginia. The training was facilitated through a federal partnership with experts from the Veterans Administration (Seattle, Palo Alto and Minneapolis) and in collaboration with the Psychology Department at NMC Portsmouth.

2011—An updated Navy Tobacco Cessation Facilitators CD was released by the Navy and Marine Corps Public Health Center Health Promotion program for those who completed the one day facilitator training.

2 March 2012—Secretary of the Navy Ray Mabus issued a Memorandum Tobacco Cessation in the Department of the Navy. The Secretary of the Navy Ray Mabus said “I would like to redouble our efforts to reduce the prevalence of tobacco use by naval personnel. To achieve this goal we must aggressively promote cessation efforts to those who use tobacco” He stated that all nicotine replacement products will be supplied and made available for Sailors and Marines aboard all ships, clinics and pharmacies, and Battalion Aid Stations. The Secretary increased the price of all tobacco products sold in Navy and Marine Corps exchanges to match the most competitive price in the community (no longer discounted prices for tobacco products). The Secretary also called for an information and education campaign, to include formal training as part of Navy and Marine Corps recruit training.

June 2012. The National Prevention Council Prevention Plan was released

and the Department of the Defense was one of the key federal participants. Tobacco free living strategy actions by DOD were listed in the plan.

August 2012—A new Tobacco free living website was developed on the NMCPHC Health Promotion Wellness website to be consistent with the National Prevention Plan.

August 2012—U.S. Fleet Forces Command expertly manages and directs the procurement of \$2.7M in Nicotine Replacement Therapy (NRT) products mandated by SECNAV to be supplied at no cost to assigned service members aboard all ships and ground forces within the BS0-60 clemency well ahead of the 01 Oct 12 deadline

2 October 2012—The Navy launched their Health Promotion and Wellness campaign on board the USS Bataan, in Norfolk, Virginia. Attending were the U.S. Surgeon General Vice Adm. Dr. Regina Benjamin, Dr. Warren Lockette, the Chief Medical Officer of TRICARE Management Agency, and Rear Adm. Michael Mittelman, the Navy Deputy Surgeon General. Tobacco free living was one of the priority areas of the prevention campaign, along with resources, programs and tools to enhance fitness, readiness and wellness.

25 October 2012—Navy Marine Corps Public Health Center hosts the first tobacco free living webinar on Gearing up for the Great American Smokeout.

3-5 December 2012—The Military Health System holds an Innovation Strategy Tobacco Deep Dive at Aber-

deen Proving Ground, Maryland. The selected participants developed five new initiatives to address and reduce tobacco use in the Department of Defense.

4 December 2012—BUMED issues updated comprehensive tobacco control policy for the Navy Medical Department.

29 March 2013—The TRICARE Smoking cessation benefit goes into full effect on this date. The Health benefit covers FDA-approved tobacco cessation medications at no cost to the beneficiary, along with tobacco cessation counseling. Also as part of the benefit are free toll free regional smoking cessation quitlines to assist with cessation, and a web based tobacco cessation support www.ucanquit2.org.

27 June 2013—The Secretary of the Navy issues a new instruction 5300.40 the 21st Century Sailor and Marine Initiative in which tobacco use and cessation is one of the priorities. The Department of the Navy (DoN) will continue to work toward a tobacco-free force by providing cessation tools, promoting a tobacco-free environment through education and ceasing the discount of tobacco products at DoN Exchanges and on-ship stores.

July 2013—The DoD Quit Tobacco campaign opened registration for the SmokefreeMIL program, a mobile text messaging program that provides 24/7 encouragement for those who are trying to quit smoking.

August 2013—DoD announced the

Fight the Enemy Video Contest is open to all active duty to develop a video to address tobacco use.

14 November 2013—The Navy Medical Inspector General established a new criterion of reviewing the MTF Health Promotion Comprehensive Tobacco Control Program as part of the inspection process.

January 2014—The 50th anniversary of the first Surgeon General's Report on Smoking and Health was January 11, 1964. The U.S. Surgeon General Vice Adm. Regina Benjamin issued a report- The Health Consequences of Smoking-50 years of progress to highlight the improvement and progress in addressing tobacco, present new information on the health consequences of tobacco use, and to offer new initiatives to address tobacco.

March 2014—The winners of the DoD Fight the Enemy Contest were announced on Kick Butt's Day. Navy participants were awarded second and third place for their video submissions.

2014—Twenty percent of military personnel smoke and 13 percent use smokeless tobacco products. Tobacco-related illnesses drain \$1.6 billion annually from military health care accounts.

February 2014—In an interview with CNN supporting the decision by CVS to stop selling tobacco products, Navy Surgeon General Vice Adm. Matthew Nathan said "Most of us who are in the healthcare leadership business realize we have failed if we have any young

person, military or not, start smoking or using tobacco related products. We failed to impress the dangers and inherent risks and something dramatic has to happen. "

14 March 2014—Department of Defense issues memorandum "Reducing Tobacco Use in the Armed Forces and the Department of Defense." Memo outlines goal to eliminate tobacco in the military by 2020.

May 2014—Secretary of Defense Chuck Hagel requested a review of military tobacco policies. A Defense Advisory Committee on Tobacco was established to review issues including tobacco use in uniform, tobacco pricing, tobacco sales and other clinical initiatives.

July 2014—Partnership for Prevention released a new resource Help Your Patients Quit Tobacco Use: An Implementation Guide for the Armed Forces. Navy Marine Corps Public Health Center participated with the development of the handbook and highlighted were three innovative Navy Medicine tobacco cessation programs at Naval Hospital Jacksonville, Branch Health Clinic Norfolk, and Lovell Federal Health Care Center.

12 November 2014—Navy Marine Corps Public Health Center hosted a tobacco free living webinar "Addressing Tobacco Use on a Military Installation: A Collaborative Approach to Reducing Use." Speakers were from the U.S. Air Force and the U.S. Marine Corps Semper Fit and Marine Corps Exchange Headquarters.

November 2014—The Military Health System announced the winners of the Healthy Base Initiative Teen Fight the Enemy contest. The Navy team from Groton, Connecticut tied for first place with their video Fight the Enemy: the Game.

SOURCES:

This historical timeline would not have been as thorough without the assistance of the Navy and Marine Corps Public Health Center in Norfolk, Va. In addition, Capt. (ret.) David Moyer's *The Tobacco Reference Guide* (www.tobaccoprogram.org) is an incredibly thorough and valuable resource and recommended for anyone wishing to know more about this topic.



A wounded Marine enjoys the comfort of a cigarette while receiving glucose and a preliminary examination of his injuries in the shock and resuscitation area aboard the amphibious assault ship USS *Tripoli* (LPH-10) only minutes after arriving, ca 1968.

BUMED Archives



**Jan Herman, BUMED Historian (1979-2012) and
founder of the BUMED Oral History Project, ca. 1984**

BUMED Archives

Naval Medical Historian Receives Forrest Pogue Award

On April 9, 2015, retired Bureau of Medicine and Surgery (BUMED) Historian, Jan K. Herman was awarded the prestigious Forrest C. Pogue Award at the annual Mid-Atlantic Oral History Association Region (OHMAR) Conference in Camden, N.J.

Named after World War II Army oral historian Forrest C. Pogue who helped pioneer the practice of capturing historical interviews “fresh off the battlefield” in World War II, the award has been given by OHMAR annually since 1979 for excellence in oral history.

While serving as BUMED Historian from 1979 until his retirement in 2012, Herman established a robust oral history program for documenting the career experiences of Navy Medical personnel, both active duty and retired. The program began with an interview conducted with Wheeler Lipes, a former Hospital Corpsman who performed a lifesaving appendectomy aboard the submarine *Seadragon* in 1942.

“I tracked him down and he agreed to be interviewed about his experiences,” Herman recalled. “I remember I used a cheap cassette recorder which I held up to the phone. It was real high tech.” Herman would go on to befriend Lipes and, with many other interview subjects, would develop a bond that would last a lifetime.

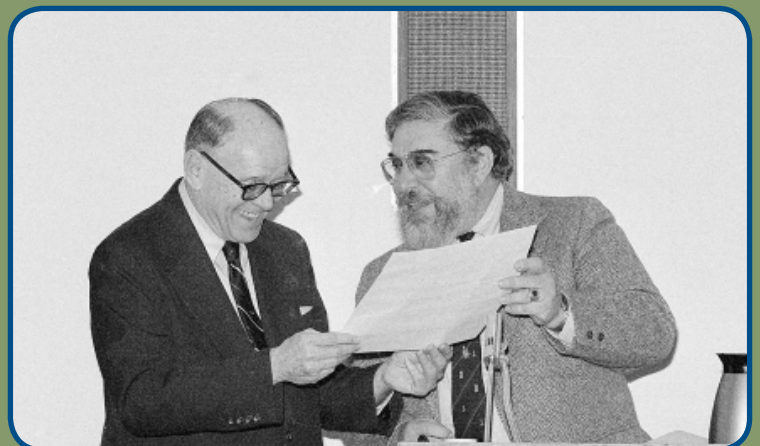
“The Lipes interview was certainly one of my favorites because it turned into a lifelong friendship,” Herman related. “In his later years we would talk every week or so and I would always ask him if I could record it and he would tell me additional stories about life in the submarine service or even meeting luminaries like Albert Einstein.”

Over the years, Herman sought out other medical veterans, each with their own stories and each another part of Navy medicine’s historical mosaic. In his 33 years as Navy medical historian, Herman would capture hundreds of first-hand accounts of medical personnel who had been prisoners of war, received the Medal of Honor, and served in the very battles and events that have helped defined the U.S. Navy and Marine Corps, from Midway to Okinawa, the Chosin Reservoir to Khe Sanh.

Herman adapted many of these narratives into articles, books and documentary films, including the six-part documentary series, *Navy Medicine at War*.

“This award is being given to Jan Herman for his pioneering work in Navy Medicine education” said Dr. David Winkler, Naval Historical Foundation Historian and member of OHMAR. “For over thirty years Herman was able to use these interviews as teaching tools for understanding the past.”

Herman admits the award is tremendous honor but as he joked, “I had always had my sights set on a Nobel, but for an oral historian this is my Nobel and I am happy to receive it.”



Forrest Pogue receiving his namesake award in 1979 from U.S. Marine Historian Benis Frank.

Report on the Recovery, Identification and Disposition of the Remains of the Crew of USS *F-4*

By William Seaman, Surgeon USN¹

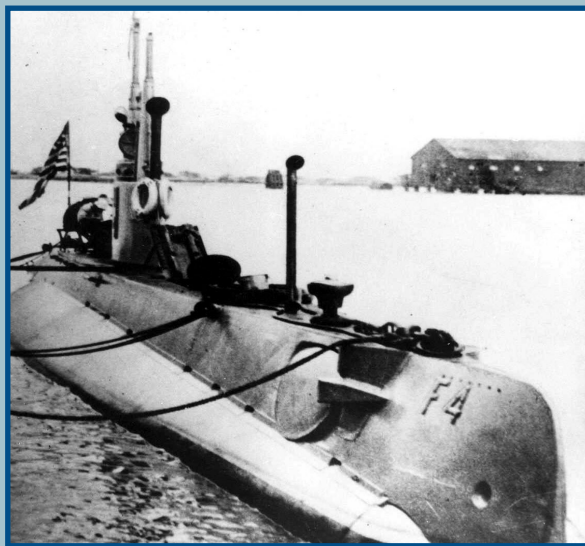
Editor's note. One hundred year ago, the U.S. Navy suffered what has been called its first submarine disaster (CSS Hunley aside). During a routine dive off Honolulu, the submarine USS F-4 sank in 51 fathoms of water, with the loss of her 21 crewmembers. Naval medical personnel stationed at Naval Hospital Pearl Harbor would help oversee the recovery, identification and disposition of the remains. Navy Surgeon William Seaman would take part in the effort and later prepare the official report to the Surgeon General William Braisted. In addition to being incredibly descriptive narrative of a role Navy Medical personnel sometime play, Seaman's report also includes what can be considered an early recommendation for issuing "Dog Tags" for all Navy personnel at sea. Below we present Seaman's report with few modification and additional footnotes where deemed necessary.

On the forenoon of March 25, 1915, the submarine *F-4* failed to return to the surface from a submerged run, and remained sunken outside the harbor of Honolulu until raised to the surface August 29, 1915, a period of more than five months.

First located at a depth of 305 feet, she was gradually worked into a depth of only 40 feet by May 25. Heavy swells wrecked the apparatus at that time employed, and salvage work ceased until late in August, when new methods were employed with success.

In May, divers reported a large rent or hole in the structure of the submarine which was considered to have been caused by the attempts at salvage. Later, in shallow water, these openings were screened with canvas to exclude marine life from the remains. An attempt was made, however, before screening, to remove, if possible, the remains through

the opening, which was sufficient size to permit entrance. Owing to the position of the boat, it resting nearly bot-



tom-side up, the battery plates had become loosened and many of them were falling; it was, therefore, considered too dangerous an undertaking for the divers to attempt any work inside the vessel at that time.

Opinions as to the condition of the remains among professional men varied from complete obliteration to a fair state of preservation. There was no data

or experience upon which to base reasonable conclusions. These opinions were founded for the most part on the various theories advanced as to the cause of the accident. It was believed by some that a battery explosion, not caused by the admission or immediately followed by the admission of sea water, might it do either one of two things—produce full escharotic action on the tissues by more or less intimate contact with them, or instantly kill by asphyxia, with no further immediate action on the tissues. Assumption that the entrance of sea water to the vessel may have been the direct or contributing cause for the disaster was a basis for the theory that the profuse effusion of chlorin [sic] gas may have bleached and preserved the bodies. Eliminating the action of the chlorin [sic] gas, it was thought by some that the entrance of sea water would so quickly neutralize the acid as the limit or entirely annul the action of the acid as an escharotic. Still others felt that the great pressure to which the vessel had been subjected would so rapidly force the contents of

1. Originally published in the *Naval Medical Bulletin*, January 1916, Volume 10, No. 1.

the fuel-oil tanks into the interior of the vessel that every object in her would be coated with this liquid, which would probably assist in repelling the action of any other. The activities of fish and more minute marine life was also given consideration, but in the absence of any positive data it was entirely a matter of guesswork. The condition of remains threw no light upon the accident or its results, nor was it possible to determine whether any of the theories enumerated above were correct. A condition noted in all four bodies recovered from the middle compartment, however, was the change to adipocere in all the adherent tissues. For example, while all the crania of those recovered were entirely denuded of tissue, the tissues of the eye were of the consistency of tallow, with no putrefactive odor.

Early in the salvage operations, when it was hoped the bodies might be recovered, the subject of the care, identification, and disposition of the remains was carefully considered by Surgeon H.C. Curl of the USS *Maryland*. Surgeon Curl was present when the boat was brought to dry dock, made the first search for remains, and was present at the recovery of the first body, but was compelled to leave on the *Maryland* before the work was completed, when that vessel was ordered to San Francisco. His methods, however, were followed so far as the conditions encountered made them practicable. Assistant Dental Surgeon Halleck, also of the *Maryland*, suggested incidentally, a method of securing finger prints on dental wax which might have proved valuable had there been opportunity to employ it. Surgeon Trotter in charge of the Marine Hospital Service at Honolulu kindly placed the

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Slow Death In Sunken Submarine

Helmet designed to save lives in submarine disasters.

At the bottom of the sea—crew of submarine suffocating.

Submarine builders have gone on constructing "undersea horrors" until now, as demonstrated by the war, they cruise about in the depths of the ocean almost with the same efficiency that a ship can on the surface—but in spite of this the great question has remained—

How can the officers and crew be rescued in case of accident or destruction of the submarine as in the case of the F-4?

Brainy men have given years to devising methods by which the men can be saved instead of being left to die in the disabled submarine like rats in a sunken trap. When it is possible to locate the helpless submarine, grapples are lowered and if they succeed in catching hold of the vessel ships, especially constructed, with huge cranes built on them, are used to haul the submarine to the surface.

The drawback to this is the difficulty and time wasted in trying to seize the submarine with the grapping hooks and the danger of loosening or wrenching her plates open in hauling the craft to the surface.

Probably one of the most practical devices is a safety helmet, which is the invention of two naval officers. In appearance it is somewhat like the safety helmets designed for use in mine explosions.

If the submarine is disabled while submerged and unable to rise to the surface again, or if it has been runned and sunk the crew would hastily don the safety helmets and make their escape either through the conning tower or through manholes or tubes provided for the purpose. In either case devices are provided that will automatically regulate the pressure of air and water.

The helmet, with a glass front something like an ordinary diving helmet, is attached to a

Grappling for sunken submarine, to be raised by derricks on rescue vessel.

WHERE F-4 WENT DOWN

PACIFIC OCEAN

OAHU I. OF THE HAWAIIAN GROUP

WAIKANE

HONOLULU

Makapuu Head

On the map above shows a view north the spot off the coast

SUTTON TO GIVE REASON

With the sudden resignation of the Rev. J. A. Sutton from his pastorate of the First Baptist church and from his membership on the social service board, came a flood of stories as to the reasons for his unexpected action.

Denials followed almost every statement, but the following appear to be facts:

That serious charges were made against the Rev. Sutton by a 15-year-old girl who lived in his house.

That these charges came before the prosecuting attorney and before the board of deacons of the church, with the sum total result that no prosecution will be forthcoming and that Sutton resigned.

The girl also furnished a denial, written, of the charges which had been the basis of Sutton's enforced visit to the office of the prosecutor.

He is declared to have made the statement that his work on the social service board, particularly his en-

Front Page, *Takoma Times*, March 15, 1915

Courtesy www.navsourc.com

quarantine buildings at our disposal. Assistant Surgeon W.W. Cress, of the *Alert*, rendered valuable assistance in the recovery and identification and was the most assiduous in his labors. The illustrious furnished were taken by Hospital Steward H.R. Jackson, who acted as official photographer for the board appointed by the Navy Department to investigate the cause of the accident.

The submarine was floated to the dock on the morning of August 31, where she lay nearly bottom side up, showing a large rent in the forward compart-

ment, together with an almost complete demolition of the bulkhead connecting the forward and midship compartment. This rent was approximately 12 feet in diameter. Surgeon Curl entered and explored as far as he was able without the assistance of portable lights the middle compartment, failing to find any signs of human remains.

The interior of the vessel was a most complete wreck as to all its parts. The vessel's position on the dock (almost completely inverted) was identical with her position while she rested on the sea

floor during the latter period of her submergence. This had rendered the battery plates still remaining in place very insecure and dangerous to those who were forced to work under them. The debris, consisting in most part, battery plates and separators to the number of several thousand, formed a pile several feet deep, all of which was subsequently cleared and carefully examined. The entire surface of the vessel and all its fittings, both inside and out, was coated with a slimy marine growth, while the effects of both acid and oil were plainly evident to the eye and nostril. The interior aspect of the vessel was indescribable, and the entire boat gave off a peculiar odor consisting of a combination of decaying marine life, human remains, and fuel oil. Owing to the ventilation near the rent the odor was not so overpowering in the middle compartment, but no work could be carried on in the engine room until an opening had been cut in the shell and a blower introduced and operated for several hours.

It was in the after compartment, or engine room, that most of the bodies or parts of bodies were found, only four having been recovered from the middle compartment and none from the forward.

About 8 a.m. of August 31, a shoe was seen above the debris near the forward bulkhead of the middle compartment, which [the] investigation proved to be incasing the foot of what proved to be the remains of C.C. Ashcroft, gunner's mate, first class. Human remains continued to be found at intervals until September 9, when the submarine was declared to be clear of human debris by the senior line officer directing the salvage work. No remains were found

in the forward compartment, three were found in the middle department that were positively identified and one not susceptible of identification, while the after compartment or engine room yielded 13 or parts of 13 bodies, only one of which could be positively identified.

It is impossible to state with any accuracy, however, how many bodies the incomplete and mutilated bones found toward the end of the removal of debris represented. For instance, a broken femur, some metacarpal bones, a few broken ribs, and incomplete fragments were regarded and listed as part of a body. These bones represented a collection found lying in apposition or nearly so. It is possible that these groups may have been mixed—quite possible that one bone found among others was all that remained of some individual. The large rent made it possible for bodies to be washed out. There were only six skulls found indicating that parts of skeletons disappeared in that way. Whether entire bodies were swept out or the recovery of the remains did not determine.

All stages of preservation and disintegration were encountered. Six skulls only were found, and all disarticulated and entirely denuded of tissue, except, as before mentioned, the tissues of the eye were converted into adipocere. These skulls were found in the middle compartment.

The inferior maxillae were disarticulated in all instances. Of the six skulls recovered but one was in perfect condition, the others having suffered one or more fractures. The front teeth in all had been knocked out, except in one instance where extensive bridge work had

been performed and which served to reinforce the structure. The long bones and ribs were, in most cases, fractured. Most of the damage to the bony structures was no doubt caused by the rough handling of the boat during the salvage operations, particularly during the rough weather, when the boat was no doubt turned completely over and repeatedly lifted and suddenly dropped to the floor of the sea, while the bodies were being constantly subjected to the attrition of the heavier objects in the interior of the vessel.

Mention has been made of the conversion of flesh into adipocere. In all of the three bodies recovered from the middle compartment that were subsequently identified the flesh adhering to the long bones had been converted into this fatty substance resembling adipocere. To this peculiar substance there was but little putrefactive odor. The fourth body recovered in this compartment consisted of but a few bones, sufficient only to establish it as parts of a fourth body. In two subjects removed from the engine room, where the flesh in other parts of the body was in advanced stage of putrefaction and very offensive as to odor, the feet covered by the shoes were in an almost perfect state of preservation, the nails were in all cases intact, hair was still adherent, the skin intact and natural in color. At this point it might be apropos to mention the condition of the shoes, which in all cases were well preserved. Dungaree material in many cases showed a natural color and in some cases was still firm in texture, although in most cases this quality was lost. Many of the bones were separate and entirely denuded of flesh and blackened, suggesting, pos-

sibly, the action of chemicals or fuel oil, probably the latter, as a brisk washing removed the discoloration. In several instances I recall, the contour of the buttocks could be noted. In but a few instances, however, could intestinal organs be identified. Portions of socks and underwear were found in advanced stages of disintegration but still adherent to portions of the bodies. Identification of four bodies was positively made; that of Ashcroft, the first body recovered, by a bridge (lower) described in his health record.

Wells, C.H., machinist's mate, second class, was identified by a notebook containing many penciled notes, positively establishing his identity.

Herzog, F.N., electrician, second class, was identified by absence of molars noted in his health record and a large "h" cut in the heel of his shoe.

Mahan, I.L., machinist's mate, first class, recovered from the engine room, was identified by articles found in the pockets of the clothing still adherent to the body.

No further identification of bodies was possible. Mounds of bones were dug out with the debris of the engine room which were later separated into the parts of three or four bodies. In all of skulls recovered, there was bridge work, crowns, and fillings not noted on the health records. Of the 21 health records examined, there was only one entry of bridge work and one gold crown. Two local dentists who had done much work for the submarine flotilla, were consulted with reference to the dental work noted in the recovered skulls, but the work could not be identified in any case with their office records. This dental work had probably been done on

the west coast before the flotilla came to Honolulu. This lack of dental identifications could have been made had the characteristic dental operations been noted on the health records. It has been suggested that metal tags, light in weight—aluminum, for instance—be attached to officers and men, especially those doing submarine work, and worn about the neck. Experience in this accident teaches that if worn about the neck they would have been useless, as all the skulls were separated from the bodies; but that if worn about the ankle they would have remained. It would be well to insist on a regulation requiring that the heels of all shoes be marked with the initials of the owner cut into the leather.

The following procedures were carried out in handling the remains: A lighter was secured to the end of the dry dock, screened from outside observation with canvas. This was outfitted with tables, autopsy instruments, and other paraphernalia necessary. The remains, as they were handed out of the vessel, were placed upon sheets of canvas and carried, when complete, to the lighter. They were placed upon the tables, and Dr. Cress and myself, with the assistance of the Hospital Corpsmen, carefully went over the remains, endeavoring to identify. Each bone was cleared of dirt and washed, and when the bones of the body were assembled after being denuded of flesh, the bones were placed in a gunny sack, tied, labelled (if identified or otherwise), and the sack and contents drenched with formaldehyde solution and placed in a large vat built in the middle of the lighter. The denuded flesh and debris was thrown in another sack, weight

with grate bars, which, when filled, was carried far out to sea and sunk.

After the remains had been removed from the submarine, the lighter was towed to the quarantine dock, where the identified remains, the bones being carefully wrapped in cotton surrounded by oakum, were placed in caskets. The parts of the 13 unidentified bodies were divided and placed in the four metallic caskets.

After the usual formalities with the Territorial board of health, death certificates having been secured, the caskets were transferred to the USS *Supply* for transportation to the United States.⚙

ABOUT THE AUTHOR

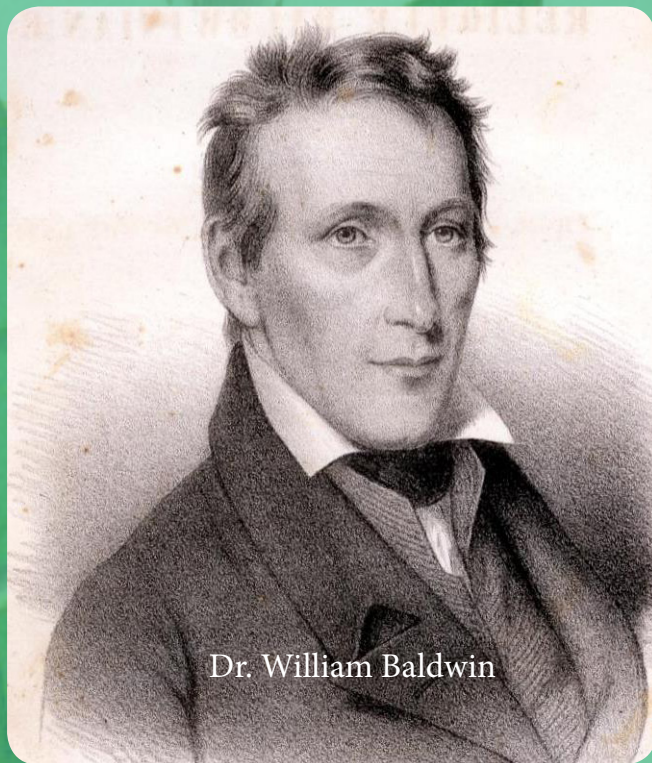
William Seaman was born in Canada on August 8, 1871 and was appointed an Assistant Surgeon in the U.S. Navy in May 1901. Over the course of his 28-years in service Seaman served at the Naval Station/Naval Hospital Pearl Harbor, Naval Stations Guam and Virgin Islands, and aboard the ships USS *Prairie*, USS *Rhode Island*, and USS *New York*. Seaman died in service in 1929.

Barton and Baldwin:

The Navy's Preeminent Botanical Scientists

Not unlike the Dr. Stephen Maturin character in the Patrick O'Brien's novels, the U.S. Navy's first physicians were products of enlightenment and explorers of the natural world. In addition to medical topography, early reports by ship surgeons often contained observations on climatology, zoology, geology, and especially botany. It is little surprise that botany, one of the oldest natural sciences, was also one of the first scientific specialties in Navy Medicine. As most medicines used by ship surgeons in the eighteenth and nineteenth centuries were plant-based, the first Navy physicians needed to have knowledge of botany and material medica. Two Navy physicians, however, William P.C. Barton (1786-1856) and William Baldwin (1779-1819) went far beyond a working knowledge of botany to make significance contributions in the field. In the process, he would help pioneer a proud tradition of science in Navy Medicine that continues to this day.

Dr. William Paul Crillon Barton was born into a prominent Philadelphia family that the preeminent botanist Benjamin Smith Barton (uncle). His uncle helped institute an academic tradition for botany at the University of Pennsylvania; and he would later tutor Meriwether Lewis on uses of plants in medicine and food before the latter's journey into the unexplored Louisiana Territory in 1804.



Dr. William Baldwin

Like many young physicians at the time seeking adventure and honor, Dr. W.P.C. Barton decided on a career in the U.S. Navy, receiving a commission in 1809. In his lengthy career—which extended until his death in 1856 —Barton would keep scurvy at bay by introducing a citrus ration to the U.S. fleet; publish the first writings on hospital administration in the military; help prohibit alcohol rations aboard Navy ships; and finally serving as the first chief of the Bureau of Medicine and Surgery (1842-1844). While on active duty Barton also served tenures as professor of botany at the University of Pennsylvania and at Thomas Jefferson Medical College, respectively, and set forth on an ambitious field research project to document American plant life. In the process, Barton compiled several compendiums of American plants including *Flora Philadelphiae Prodrum* (1815), *Vegetable Materia Medica of*

the United States (2 volumes, 1817-1825) and *Flora of North America* (1821-1823); each would be considered standards of botanical science.

Fellow Navy surgeon, William Baldwin was a student of Benjamin Barton and naturalist-extraordinaire, William Bartram. A native of Newlin, Penn., Baldwin was commissioned in the Navy in 1812 serving first as medical officer for gunboat flotilla based in St. Mary's and later in Savannah, Ga. Following the close of the War of 1812,



Baldwin travelled through eastern Georgia and Florida collecting botanical specimens and penning detailed descriptions of local flora that would be used by botanist Stephen Elliott in his *Sketch of the Botany of South Carolina and Georgia* (1821). In 1817, Baldwin was selected to serve as medical officer aboard USS *Congress* on its mission to Venezuela to conduct field expeditions and investigations on sustainable vegetable production in South America. Despite suffering from pulmonary tuberculosis, Baldwin was selected by the Secretary of War to be a part of Major Stephen Long's expedition to the Rocky Mountains in 1819. He would die of respiratory failure while on the expedition the very same year.

Although not as prolific as Barton, Baldwin's botanical observations were published in the *Journal of American Science* (1818) and posthumously in *Transactions of the American Philosophical Society* (posthumous, 1825). The thousands of specimens he collected would be distributed for various herbaria and museums throughout the country and be used for study. The respect for Baldwin's work among fellow botanists was so great that the plant genus *Balduina* and the Baldwin Herbarium

in Philadelphia, Penn. would later be named in his honor. 🌿



Dr. William Barton

Courtesy of Philadelphia Museum of Art

Barton's illustrations of plantlife from
his *Flora of North America*

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